

CLAIMS

1. Pump for dispensing fluid products comprising a pump body (10), a pump chamber (20), at least one piston (30; 72) sliding in said pump chamber (20) to dispense the fluid product, a dispensing orifice (45),  
5 and a shutter (38) interacting with said dispensing orifice (45), said shutter (38) being movable and/or deformable between a closed position of the dispensing orifice (45) and an open position of the dispensing orifice (45), said shutter (38) being elastically  
10 driven to its closed position, characterised in that the pump comprises only one elastic element (50), such as a spring, adapted for bringing said at least one piston (30, 72) back to its rest position after actuation and for driving said shutter (38) to its  
15 closed position, and in that said at least one piston (30) is embodied in one piece with said shutter (38).

2. Pump according to claim 1, wherein said spring (50) is away from all contact with the fluid product.

3. Pump according to claim 1 or 2, wherein the  
20 pump comprises a retaining ring (15) adapted to anchor said pump to a tank (60).

4. Pump according to claim 3, wherein said pump body (10) is embodied in one piece with said retaining ring (15).

5 5. Pump according to claim 3 or 4, wherein said retaining ring (15) is embodied in one piece with a plunger tube (18) intended to extend into a tank (60).

6. Pump according to any one of claims 3 to 5, wherein said retaining ring (15) is embodied in one piece with an inlet valve seat (71) of the pump chamber  
10 (20).

7. Pump according to any one of the previous claims, where the pump comprises a dispensing head (40) including the dispensing orifice (45).

8. Pump according to claim 7, wherein said pump  
15 body (10) is placed inside said dispensing head (40).

9. Pump according to claim 7 or 8 and any one of claims 3 to 6, wherein said dispensing head (40) is connected, particularly by being snapped, irremovably onto said retaining ring (15), said dispensing head  
20 (40) and said retaining ring (15) forming a stop to define the rest position of the pump.

10. Pump according to any one of the previous claims, wherein an insert (39) is placed in the pump chamber (20) upstream of the dispensing orifice (45).

25 11. Pump according to claim 10, wherein said insert (39) is embodied in one piece with said shutter (38).

12. Pump according to any one of the previous claims, wherein said pump is constituted by only four  
30 parts including the part forming the dispensing head (40), the part forming the piston (30) and shutter

(38), the part forming the spring (50), and the part forming the pump body (10), retaining ring (15) and plunger tube (18).

13. Pump according to claim 12, wherein the part  
5 forming the pump body (10), retaining ring (15) and plunger tube (18) also form the seat (71) of an inlet valve (70) of the pump chamber (20) interacting with a valve element (75).

14. Pump according to claim 13, wherein the valve  
10 element (75) is integral with the part forming the piston (30) and shutter (38).

15. Pump according to any one of the previous claims, wherein said pump chamber (20) is placed immediately upstream of said dispensing orifice (45),  
15 said shutter (38) forming an outlet valve of said pump chamber (20).

16. Device for dispensing fluid products including a tank (60), characterised in that the device comprises a pump according to any one of the previous claims.

20 17. Device according to claim 16, wherein the pump is anchored, particularly by being snapped on to the tank (60) with interposition of a gasket (65).